

Application No. 10/699,074
Reply to Office Action of May 4, 2006

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REMARKS

Applicant respectfully requests reconsideration of the application in light of the amendments above and remarks that follow.

In the Office Action, claim 2 was rejected under 35 U.S.C. § 112. Claims 1-43 and 46-58 are rejected under 35 U.S.C. § 102(b) as being anticipated. Claims 44, 45 and 59 are rejected under 35 U.S.C. § 103(a).

In response to the Office Action and after review, the filed claims have been amended in a manner that the Applicant believes overcome the rejections.

At the onset, Applicant wishes to highlight some of the novel features of the claimed system and method of operation. Applicant provides a system for allowing an ISAM database server application to be utilized with an SQL database server without source level changes. The manner in which they do it is both novel and not obvious.

The present invention migrates an application regardless of the specific ISAM based database management system. It does not consider whether the system is Btrieve, DataFlex or any other ISAM-based data. This is because, unlike the prior art, the database migration tool identifies at least one repository within the ISAM database server containing information regarding the ISAM database structure associated with the application of interest. It creates ISAM database structure information about the ISAM database so that the database driver can utilize the ISAM database information when processing the application. In this way, the present invention carries the ISAM information with it necessary for migration of the particular application enabling the system to work on applications developed around any ISAM database server or database management system.

This is a departure from the prior art. The prior art teachings assume the structure of the ISAM database management system. The teaching at Page 4 of Sierakowski for the "Conversion Strategy" tells the user in advance the operational parameters and structure of the particular Btrieve application of interest. There is no discussion of identifying and determining the necessary structure information or

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creating the ISAM database structure information file to be utilized at a later time for migration. Sierakowski knows the universe beforehand. It does not have to perform this critical step. Sierakowski must do its homework ahead of time for each ISAM migration. This is why Sierakowski is silent on this critical point. Accordingly, Applicant submits that Sierakowski is silent as to the teachings of claim 1 as amended and respectfully requests withdrawal of the rejection under 35 U.S.C. § 102.

Claims 3-45 depend from claim 1 either directly or indirectly and define applicant's invention with greater particularity. By way of example, claim 10 defines the structure information as being data files or table definitions or indexed information. This is the type of information utilized by the claimed database driver to translate the functional ISAM application program interface calls into efficient SQL statements without knowing in advance the parameters of the ISAM database or ISAM data management system.

The Office Action relies on the DTS Wizard figures as teaching that the type of information utilized is inherently data files, table definitions, or index information. However, all that is shown in the prior art example is that data can be copied from any of the closed universe sources listed in the drop down table of the DTS Import Wizard and that they can be imported to a second server utilizing WINDOWSNT or SQL server authentication. The "wrapper dll" utilizes the structure information of tables only after they have been migrated using the DTS wizard. The wrapper dll does not interact with the target ISAM database nor does it create any additional information to maintain transparency between the application and the database. The wrapper dll works only if the table structure is known. This precludes any automated way of allowing applications to work with the SQL databases without source level changes. Therefore, there is no teaching that the information being made use of is the claimed data files, data definitions or index information. The structural makeup of the ISAM database is not known until the data files are available on the SQL server. SQL queries, as specified in the Sierakowski examples cannot be constructed until the complete table structure, including tables name, column names, column data types are made available to the program to construct the queries. The Office Action is applying hindsight

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invention to read the attributes of the claimed invention in light of applicant's teaching into the screen shots at page 7 of the Sierakowski reference.

Another exemplary claim, which highlights the difference between the approach of the present invention as claimed and Sierakowski references, is claim 29 which also depends directly from claim 1. Claim 29 defines the creation of the auxiliary file which contains table structure information for the ISAM supported data, but which is not supported by the SQL database server. The Sierakowski article is cited as teaching this feature in connection with the Btrieve position block handle. However, claim 29 is directed to the novel use of auxiliary databases by the claimed system. The auxiliary file contains the ISAM database structure information. This auxiliary database allows more efficient, faster migration of the data. It acts as a bridge between the two systems.

The ISAM database structure information includes the library definitions, the indices, the tables structure and the like which allows complex manipulation of the ISAM database associated with the ISAM database server.

In contrast thereto, the position block handle as taught in the Sierakowski article merely gives you a start position within Btrieve. The position block in Btrieve is a physical location within the data file which uniquely identifies each record and with proper offset information can identify any record within a file. Sierakowski does not identify how the position block is translated and handled in an SQL database to find random records. Indeed, the approach Sierakowski suggests requires modification of the source base since most ISAM based applications rely on the position block to find and fetch random records from the data file. Sierakowski says nothing about finding random records within a file with the position block. One would need an external file in order to determine where in Btrieve to start, given the family relation structure of ISAM databases. Accordingly, Applicant submits that claim 29 further highlights the difference in structure and operation of the claimed system and the prior art.

Similarly, claims 39 and 40, which depend on claim 1, indirectly define a database migration which identifies the repository containing information about the

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ISAM database structure and that the information includes such things such as data dictionaries, file definitions, file lists, tables, indices, sequence definitions or any other information which defines an ISAM database structure. Again, Sierakowski is silent as to this feature. It is silent because it assumes that the programmer will analyze the tables (after migration) visually or manually to understand the table structure and then construct queries based on that knowledge. This approach also precludes complete independence from the source.

In rejecting these claims, the Office Action again relies on the wizard figures. However, the figures at page 8 of Sierakowski show an option of copying tables. However, it is respectfully submitted that these are the data tables, and if they are the structure tables, they are not the indices, sequence definitions, data dictionaries, file definitions or the like which are necessary to make such copying possible. One cannot argue that it is inherent that such information is sought in the first place because, as discussed above, at pages 4 and 5 of the prior art reference, the characteristics of the Btrieve application are spelled out. DTS migrates indexes and other information only after manually going through the table information, after the migration, to know what the structure information is. Accordingly, Applicant respectfully submits that claims 1-43 define a system incorporating a novel migration tool which utilizes ISAM database structure information in a manner not taught in the prior art in order to facilitate migration of ISAM applications no matter what the application. The system is application agnostic as compared to the prior art which assumes a specific Btrieve application to be operated upon. Accordingly, Applicant respectfully requests the withdrawal the rejection of these claims under 35 U.S.C. § 102.

Claims 46-58 are directed to the methodology substantially practiced by the system of claim 1. Claim 46 defines the method of migration. In particular, the method includes identifying the important repositories, those containing the information regarding the ISAM database associated with the application, culling that information to create ISAM database structure information and utilizing the ISAM database structure information to translate intercepted function calls into SQL functional calls and statements in a transparent manner without requiring any need to alter any source

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code. This is because the migration tool determines the structure of the legacy database and knowing the structure of the database is able to translate that database into a SQL server-friendly format.

As discussed above, Sierakowski is silent to any culling, creation or use of ISAM database structure information. Accordingly, Applicant submits that claim 46 is allowable over the prior art and respectfully requests the withdrawal of the rejection under 35 U.S.C. § 103.

Claims 47-58 depend from claim 46 and define the invention with greater particularity.

Specifically, claim 47 defines choosing the specific data files to be migrated. Claims 48 and 49 define the specific ISAM database structure information which makes the process possible including, but not limited to, tables, indexes, sequence definitions, data dictionaries, file definitions or the like. There is no mention of making use of this type of data by Sierakowski during its translation process. Accordingly, Applicant submits that claims 47-58 are allowable as defining patentable combinations in their own right as well as depending from allowable claim 46 and Applicant respectfully requests the withdrawal of the rejection under 35 U.S.C. § 103.

Claims 44, 45 and 59 are rejected under 35 U.S.C. § 103 as being unpatentable over Sierakowski in view of Deleeuw. Applicant respectfully traverses the rejection. Nothing in Deleeuw overcomes the shortcomings of Sierakowski discussed above. Deleeuw is not concerned with the identification of repositories in the ISAM database server, nor the use of that data in order to facilitate migration and translation of the application from an ISAM database management system to a SQL server. Accordingly, Applicant submits that even the combination of the references does not teach the claimed invention. Accordingly, Applicant respectfully requests the withdrawal of the rejections under 35 U.S.C. § 103.

Applicant submits that the application is in condition for allowance. If the Examiner is unable to issue an immediate Notice of Allowance, he is respectfully

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requested to telephone the undersigned attorney with a view towards discussing the outstanding issues.

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Respectfully submitted,

By 

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